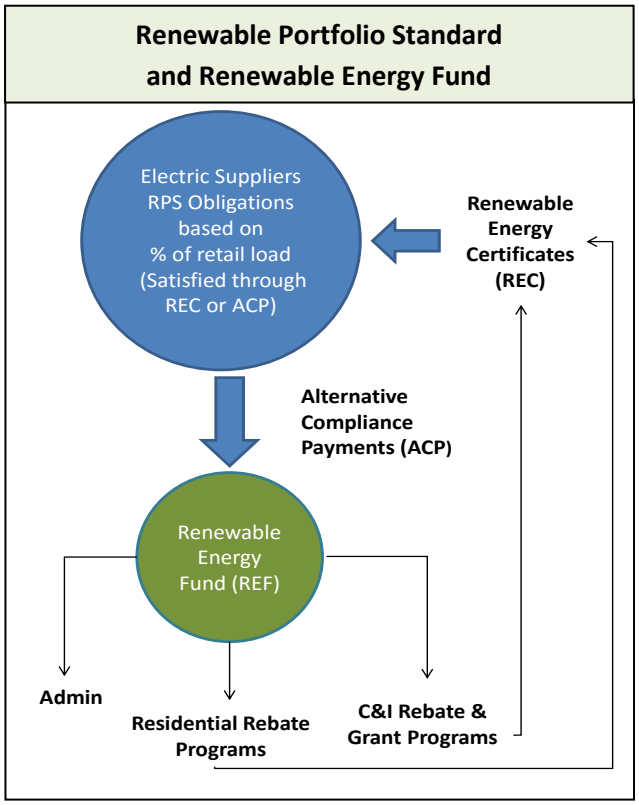
Renewable Portfolio Standard, Renewable Energy Certificates and REC Markets

New Hampshire's Renewable Portfolio Standard (RPS) statute establishes the renewable energy policy for the state. Renewable energy comes from an energy source that is rapidly replaced or renewed through a natural process. Common renewable energy sources are solar, wind, hydropower, biomass, and geothermal. These energy sources provide a sustainable, affordable, and relatively unlimited power supply. Renewable energy enables New Hampshire municipalities, schools, businesses, and residents to realize economic and energy security benefits. The industries associated with designing, building and installing these systems increase economic activity in the state.

Renewable energy generation technologies can provide fuel diversity to the state and the New England generation supply through the use of renewable fuels sourced locally, thereby lowering regional dependence on fossil fuels. This has the potential to lower and stabilize future energy costs by reducing exposure to rising and volatile fossil fuel prices. Usage of local and renewable fuels also allows more energy dollars to be retained in state rather than spent on imported fuels. In addition, employing low emission forms of such technologies can reduce the amount of greenhouse gases, nitrogen oxides, and particulate matter emissions transported into New Hampshire and also generated in the state, thereby improving air quality and public health, and mitigating the risks of climate change.



The RPS statute established four classes of renewable energy resources. Electricity suppliers must obtain renewable energy certificates (RECs) for each of the four classes as a set percentage of their retail electric load. One REC represents one megawatt-hour (MWh) of electricity, or an equivalent amount of thermal energy (3,412,000 Btu), generated from a renewable source.

RECs generated in one state may be sold in another provided they are certified in that state. If electricity suppliers cannot, or choose not to, purchase or obtain sufficient RECs to comply with the RPS law, they must make alternative compliance payments (ACPs) to the Renewable Energy Fund (REF). The REF is a dedicated, non-lapsing fund, the purpose of which is to support electrical and thermal renewable energy initiatives. The Sustainable Energy Division of the Public Utilities Commission administers three residential rebate programs, two commercial and industrial rebate programs and one competitive grant program with funding from the REF. ACPs are the sole source of funding for the REF and fluctuate from year to year, depending on the price and availability of RECs in the regional market (comprising CT, RI, MA, ME, VT and NH).

Regional REC Market

RPS compliance is verified using a renewable energy certificate (REC), which is "an electronic record showing that one unit of eligible renewable electricity has been generated"; in New Hampshire and surrounding states, the unit is equal to one MWh. Renewable Energy Certificates are managed through the New England Power Pool Generation Information System (NEPOOL GIS). The certificates created from eligible renewable energy generation are sold in this regional market, and are retired throughout New England.

REC prices fluctuate depending on the regional market and state-specific RPS obligations or ACP rates. Demand for RECs might be responsive to changes in ACP rates, especially if the rates are particularly high and paying ACPs are especially disadvantageous. If a facility is certified to sell RECs for multiple state RPS programs, then the available RECs are generally sold in the states where the ACP rates are highest, with the ACP rate acting as an informal price ceiling.

Further, when the demand for RECs is greater than the supply, the price of a REC rises to approach the ACP. When the supply of RECs substantially exceeds the RPS-obligated demand, the REC price may drop to a price approaching zero, because if every entity that must comply with an RPS requirement has met that requirement, then the remaining unsold RECs have no market value, other than banking RECs for future compliance periods. Generally, an RPS program's REC supply is generated in a "lumpy" fashion, while the requirements tend to increase at a steady rate.[1]

Voluntary REC Market

RECs may also be sold in a voluntary market, which are typically national. The voluntary green power market refers to the sale and procurement of renewable energy for voluntary purposes by residential and commercial customers as opposed to sales of RECs for state RPS compliance. Historically, the majority of voluntary green power transactions have been relatively small sales made to residential and small commercial customers. However, large customers have taken on an increasingly prominent role in the voluntary green power market in recent years.

[1] New Hampshire Public Utilities Commission 2011 RPS Review.